

Applicant : Shashidhar Sathyanarayana
Appl. No. : 10/791,352
Examiner : John Fernando Ramirez
Docket No. : 701740.4074

Remarks

Claims 1-31 are currently pending in this application.

Claims 1-31 currently stand rejected under 35 U.S.C. 102(b) as being anticipated by Ferre et al (US 5,967,980) ("Ferre"). Because the Ferre reference fails to disclose all of the elements of any claim of the instant application, the Ferre reference does not anticipate the instant application. Applicants therefore respectfully request that the rejections of claims 1-31 be withdrawn and the claims be allowed to issue.

The Ferre reference teaches a system for tracking the position of a medical instrument with respect to a patient's body, during surgery. Ferre, col. 2, lines 22-26. According to the Ferre reference, the position of the medical instrument is determined by using a reference unit, such as the headset 12 shown in FIG. 1 of the Ferre reference. Ferre, col. 3, lines 51-53. This headset broadcasts either an electromagnetic or ultrasonic signal, with three components to the signal, so the signal broadcasts in three dimensions. Ferre, col. 3, lines 55-58, col. 4, lines 4-8. These signals are picked up by a sensor on the medical instrument, and processed by a computer to correlate the position of the medical instrument with pre-recorded images taken of the patient. Ferre, col. 3, lines 28-35, col. 5, lines 43-51. Since the position of the pre-recorded images is already known in Ferre, the medical instrument can be mapped to the pre-recorded image, once the position of the medical instrument is calculated using the teachings of Ferre.

This method and system is quite different from the methods and systems claimed by applicant. The method of claim 1 and the medium of claim 14 each recite, inter alia, "receiving a first image captured by the catheter", "receiving a second image captured by the catheter", "comparing the first and second images to determine first correlation loss data between the first and second images", and "determining first position data for the second image ... using the first correlation loss data." The methods taught by Ferre do not disclose these method steps. The Ferre reference does not even teach determining the position of the images at all. Ferre teaches determining the position of the medical instrument. The systems and methods of Ferre use an extra part, i.e. the registration unit, to broadcast positioning signals to a sensor on the medical instrument. They do not use image data gathered by the medical instrument to determine the position of the instrument, much less to determine the positions of the images, as claimed. Ferre provides no disclosure of "comparing the first and second images to determine first correlation

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loss data," nor of "determining first position data for the second image ... using the first correlation loss data". Ferre, instead, teaches triangulating the position of a medical instrument by receiving three broadcast signals from a registration unit.

Similarly, for claim 27, the claim recites "determining a position in three dimensions of the plurality of images using data contained in the images." The Ferre reference does not even teach determining the position of images at all. Ferre teaches determining the position of a medical instrument. Furthermore, Ferre does not teach using data contained in the images to make the positioning determination. Ferre teaches using a registration unit that broadcasts positioning signals to a sensor on a medical device. Thus the Ferre reference totally fails to disclose or even suggest "determining a position in three dimensions of the plurality of images using data contained in the images" as claimed in claim 27.

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Conclusion

Prompt and favorable action on the merits of the claims is earnestly solicited. Should the Examiner have any questions or comments, the undersigned can be reached at (949) 567-6700.

The Commissioner is authorized to charge any fee which may be required in connection with this Amendment to deposit account No. 15-0665.

Respectfully submitted,

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